

### In the Claims

1. Probe storage device comprising: a storage surface for storing data represented by deformations in the surface; a probe facing the surface and including a resonant circuit having a reactance dependent on deflection of the probe relative to the surface; a scanner for scanning the probe across the surface such that the probe follows said deformations; and, a detector for reading data stored on the surface by detecting variation of the resonant frequency of said circuit.

2. Device as claimed in claim 1, wherein the reactance comprises a variable inductance.

3. Device as claimed in claim 2, wherein the variable inductance comprises a ferromagnetic element and a coil defining current path moveable relative to the ferromagnetic element in response to deflection of the probe.

4. Device as claimed in claim 1, wherein the reactance comprises a variable capacitance.

5. Device as claimed in claim 1, wherein the detector comprises a first signal generator connected to the resonant circuit for generating a first signal in the resonant circuit and, a mixer

for multiplying the output from the resonant circuit by a second signal synchronized to and phase shifted from the first signal and having a similar wave form to that of the first signal.

6. Device as claimed in claim 5, wherein the detector comprises a second signal generator for generating the second signal, the first and second signal generators being synchronized by a synchronization signal.

7. Device as claimed in claim 5, wherein the detector comprises a phase shifter having an input connected to the output of the first signal generator and an output connected to the mixer for generating the second signal by phase shifting the first signal.

8. Device as claimed in claim 5, wherein the detector comprises: a low pass filter for filtering the output of the mixer; and sample and hold circuit for sampling the output of the low pass filter; and a detection circuit for converting samples from the sample and hold circuit into binary values.

9. Device as claimed in claim 5, wherein the first and second signals vary at substantially the resonant frequency of the resonant circuit when the probe is not deflected.

10. Method for detecting data in a probe storage device, the method comprising: storing data as deformations in a storage surface; positioning a probe facing the surface and including a resonant circuit having a reactance dependent on deflection of the probe relative to the surface; scanning the probe across the surface such that the probe follows said deformations; and, reading data stored on the surface by detecting variation of the resonant frequency of said circuit.